

AMENDMENTS TO THE CLAIMS

1. (original) A door apparatus, comprising:

a door movable in opposite opening and closing directions;

a door driving device for applying a thrust force to the door to move the door;

a lock device for performing a locking operation and an unlocking operation on the door; and

a control apparatus for controlling the door driving device and the lock device,

wherein, if the control apparatus controls the lock device to perform the unlocking operation and the lock device is determined to be still in a locked state even after a set time, the control apparatus controls the lock device to perform the unlocking operation while controlling the door driving device to output a thrust in either the opening direction or the closing direction.

2. (original) A door apparatus, comprising:

a door movable in opposite opening and closing directions;

a door driving device for applying a thrust force to the door to move the door;

a lock device for performing a locking operation and an unlocking operation

on the door; and

a control apparatus for controlling the door driving device and the lock device,

wherein, if the control apparatus controls the lock device to perform the unlocking operation and the lock device is thereafter determined still to be in a locked state after a set time, the control apparatus controls the lock device to perform the unlocking operation while controlling the door driving device to output a thrust in both the opening direction and the closing direction.

3. (original) A door apparatus according to claim 1, wherein the control apparatus controls the door driving device to output a large thrust and a small thrust alternately in the same direction, and controls the lock device to perform the unlocking operation in synchrony with the timing of the changing of the large and small thrusts.

4. (original) A door apparatus according to claim 2, wherein the control apparatus controls the door driving device to output a thrust in the opening direction and a thrust in the closing direction alternately, and controls the lock device to perform the unlocking operation in synchrony with the timing of the changing of these opening direction and closing direction thrusts.

5. (new) A door apparatus according to claim 2, wherein the lock device includes mechanical locking elements and an electrical means for disengaging the locking elements to open the lock device.

6. (new) A door apparatus according to claim 2, wherein the control apparatus includes a sensor for sensing an unlocked state of the lock device, the control apparatus, while controlling the lock device to perform the unlocking operation, determining whether the sensor senses the unlocked state device before a detection time reaches the set time, and if not controls the door driving device to output a thrust in the opening direction and in the closing direction.

7. (new) A door apparatus according to claim 1, wherein the lock device includes mechanical locking elements and an electrical means for disengaging the locking elements to open the lock device.

8. (new) A door apparatus according to claim 1, wherein the control apparatus includes a sensor for sensing an unlocked state of the lock device, the control apparatus, while controlling the lock device to perform the unlocking operation, determining whether the sensor senses the unlocked state device

before a detection time reaches the set time, and if not controls the door driving device to output a thrust in either the opening direction or the closing direction.

9. (new) A door apparatus, comprising:

a door movable in opposite opening and closing directions;

a door driving device for applying a thrust force to the door to move the door;

a lock device for performing an unlocking operation on the door; and

a control apparatus for controlling the door driving device and the lock device,

wherein the control apparatus controls the lock device to perform the unlocking operation and controls the door driving device to apply the thrust force, the control apparatus determining whether the lock device is still in a locked state after a set time from an initiation of the unlocking operation, and if the lock device is determined to be in the locked state after the set time, the control apparatus controls the lock device to continue to perform the unlocking operation while controlling the door driving device to output a thrust force in at least one of the opening direction and the closing direction.

10. (new) A door apparatus according to claim 9, wherein the control

apparatus includes a sensor for sensing an unlocked state of the lock device, the control apparatus, while controlling the lock device to perform the unlocking operation, determining whether the sensor senses the unlocked state device before a detection time reaches the set time, and if not controls the door driving device to output alternate thrusts in the opening direction and the closing direction.

11. (new) A door apparatus according to claim 9, wherein the control apparatus includes a sensor for sensing an unlocked state of the lock device, the control apparatus, while controlling the lock device to perform the unlocking operation, determining whether the sensor senses the unlocked state of the lock device before a detection time reaches the set time, and if not controls the door driving device to output a thrust in either the opening direction or the closing direction.

12. (new) A door apparatus according to claim 2, wherein the lock device includes engagable mechanical locking elements and an electrical means for disengaging the locking elements to open the lock device.